

Executive Summary

1.1 Introduction

This application for a Small Power Plant Exemption (SPPE) for the Modesto Irrigation District (MID) Electric Generation Station (MEGS) Project (Project) has been prepared by MID in accordance with the California Energy Commission's (CEC's) Power Plant Site Certification Regulations (August 2000). This Executive Summary provides an overview of the Project.

This SPPE has been prepared in accordance with CEC guidelines and provides:

- A detailed description of the proposed Project
- An assessment of the Project's likely impact on the existing environment
- MID-committed measures to mitigate Project impacts to assure that environmental issues are properly and responsibly addressed
- A discussion of compliance with applicable laws, ordinances, regulations, and standards (LORS) provided within the project description and each resource section

1.2 Project Overview

MID proposes to develop a natural-gas-fired generating facility to be located in Ripon (City) (see Figure 1-1, figures are located at the end of the section) in San Joaquin County (County), California. The proposed MEGS will be a peaking facility that will be integrated into MID's plans to meet its growing native load, and provide other ancillary services and benefits to MID.

MEGS will consist of the following components:

- A nominal 95-megawatt (MW), natural-gas-fired, simple-cycle generating facility consisting of two natural-gas-fired combustion turbines
- Approximately 0.25 mile of new 69-kV subtransmission line and fiber optic cable
- Approximately 0.25 mile of new 8-inch diameter natural gas pipeline
- Water supply and wastewater tap lines into City of Ripon lines in Stockton Avenue

The Project would occupy 8 acres within a 12.25-acre parcel for which MID has obtained a purchase option at South Stockton Avenue at Doak Boulevard. Of the 8 acres, the plant would occupy approximately 6 acres near the northern side of the site. An additional 2 acres would be needed for primary access, emergency access to the plant, and transmission lines. The remaining 4.25 acres would be used for equipment laydown and construction parking (see Figure 1-2). After construction, the 4.25 acres would be available for sale, equipment storage, or future development as determined by the MID Board of Directors. A schematic

arrangement of the plant is presented as Figure 1-3. Figure 1-4 shows the proposed routes for the transmission lines, gas line, and potable and non-potable water lines.

A full-page photograph of the site prior to construction is presented as Figure 1-5. A visual simulation of the plant and transmission lines after construction is presented as Figure 1-6.

The generating facility will consist of two combustion turbine generators (CTGs) and associated support equipment providing a nominal generating capacity of 95 MW. The combustion turbines will be General Electric LM 6000 SPRINT units.

The electrical transmission interconnections will link MEGS to the MID power grid by connecting to the nearby Stockton Substation (near Stockton Avenue in Ripon) using a new double-circuit 69-kV subtransmission line running approximately 0.25 mile along a private road from the MEGS site to the substation. A fiber optic communications cable will also be placed on the same poles as the new 69-kV subtransmission line.

Natural gas for the facility will be delivered to the site via approximately 0.25 mile of new 8-inch pipeline that will connect to Pacific Gas & Electric Company's (PG&E's) existing main pipeline at Stockton Avenue and West 4th Street (Figure 1-4).

In April 2003, the City of Ripon began construction on a City improvement project for the extension of South Stockton Avenue and Doak Boulevard near the MEGS site. As part of the project, the city will install potable and non-potable water lines, sanitary sewer, an industrial wastewater line, and a stormwater system under the streets. Also as part of the improvement project, the City intends to pave the extensions of South Stockton Avenue and Doak Boulevard, add curbs, gutters, sidewalks, street lighting, and a bikeway. The purpose of the project is to provide City water supply and water disposal services to the vacant industrial parcels in the area as part of improving the roads. These parcels were subdivided in about March 2003, and the City expects other industrial developments to be located on the industrially zoned vacant land to the west of the MEGS site.

For the MEGS project, MID will construct potable and non-potable water supply tap lines and wastewater and stormwater discharge pipelines to connect to the City utility services stubbed out as part of the Stockton Avenue improvements. Specifically, MID will construct a 3-inch potable water pipeline, a 6-inch non-potable water pipeline, a 6-inch industrial wastewater pipeline, an 8-inch sanitary sewer line, two 10-inch firewater pipelines, and two 12-inch stormwater discharge pipelines. The length of the MEGS pipelines will vary, but would not extend more than 30 feet from the project site to the respective pipeline in South Stockton Avenue. Each of the pipelines will interconnect to short tap lines the City is constructing off of its main pipelines. These tap lines are being installed by the City for all of the vacant industrial parcels in the area, as part of the City's typical service connections. Installation of these tap lines prior to the paving of the South Stockton Avenue and Doak Boulevard extensions will avoid cutting through newly paved roads as each developer connects to the City's utility system.

1.2.1 Project Objectives

MID's Project objectives are described in more detail in this SPPE application. Some of MID's basic Project objectives include the following:

- To safely construct and operate a nominal 95-MW, natural-gas-fired, simple-cycle generating facility within the MID service territory.
- To provide additional generation to meet MID's growing load and meet the demands of customers.
- To increase the option of MID becoming a control area, or joining a different control area, both of which would require MID to have additional generation.
- To assist the State of California (State) in developing increased local generation projects, thus reducing dependence on imported power.
- To contribute to the diversification of the area's economic base by providing increased employment opportunities and a reliable power supply.

1.2.2 Project Site Selection

MID's approach to Project site selection focused on identifying potential project sites that satisfy MID's basic project objectives and that have low potential for environmental impacts. MID also gave consideration to sites located near existing infrastructure and within the MID service area. The proposed Project site is consistent with these site selection criteria and was based, in part, on the following key selection criteria:

- Location within MID's service territory
- Ability to gain site control
- Availability of sufficient land area
- Proximity to existing transmission and distribution lines and/or close to an existing substation
- Proximity to recycled or non-potable water supply
- Proximity to Pacific Gas and Electric Company (PG&E) main gas pipeline
- Consistency with the City and County General Plans and zoning ordinances, height restrictions, and existing land uses
- The ability, with implementation of reasonable mitigation measures, to have a less-than-significant impact on the environment
- Location in an area appropriate for industrial development

1.3 Project Schedule

Actual construction is planned to take place over approximately 9 months, from fourth quarter 2003 to third quarter 2004. Plant testing is planned to commence in the fourth quarter of 2004, and commercial operation is expected to commence no later than the first quarter 2005.

1.4 Project Ownership

MID has obtained a purchase option on the 12.25-acre site (4 parcels) of industrially zoned land located in the City of Ripon, California. The legal description of the parcels is provided in Appendix 1A.

Parcel numbers and the names of the landowners within 1,000 feet of the site and within 500 feet of the linear corridors are included in Appendix 1B.

The power plant, electric transmission lines, and fiber optic cable, will be owned by MID. MID is a public agency operated under the State Water Code. It is governed by a Board of Directors elected by its ratepayer-owners. Consistent with PG&E practice and California Public Utilities Commission (CPUC) law and regulation, the natural gas pipeline will be owned by PG&E. The sewer, stormwater, potable and non-potable water lines will be owned by the City of Ripon.

1.5 Project Alternatives

The CEC conducts its review of alternatives to satisfy the Warren-Alquist Act and the California Environmental Quality Act (CEQA). Appendix B (f) (1) of the CEC Guidelines requires a discussion of the range of reasonable alternatives to the Project, or to the location of the Project, which would feasibly attain most of the basic objectives of the Project but would avoid or substantially lessen any of the significant effects of the Project. To enable this review, the criteria and objectives that led to the selection of the site and design features of the proposed MEGS Project are provided, along with a detailed discussion of the range of alternatives considered (see Section 9.0).

A “No Project” alternative was considered and rejected as inconsistent with MID’s objectives, which include the need to develop additional generation sources. In addition, the “No Project” alternative could result in greater fuel consumption and air pollution in the State because generation from older, less-efficient plants with higher air emissions would not be reduced by generation from cleaner, more-efficient plants such as MEGS. Other possible alternative sites in the general vicinity of the proposed site were reviewed and found to be less acceptable than the proposed site. Alternative routes for the natural gas line and electric transmission line were not reviewed because of their short length and direct routes. Due to the interconnection at the edge of the site, alternative routes for the sewer, stormwater, wastewater discharge, potable, and non-potable water supply pipelines were not evaluated.

Several alternative-generating technologies were reviewed in a process that led to the selection of a modern, proven, combustion turbine simple-cycle arrangement for MEGS using natural gas for fuel. The alternative technologies included conventional oil and natural-gas-fired plants, combined-cycle combustion turbines, biomass-fired plants, waste-to-energy plants, solar plants, wind-generation plants, and others. None of these technologies are feasible alternatives to the technology selected for MEGS. A complete discussion of project alternatives is presented in Section 9.0.

1.6 Environmental Considerations

Fifteen areas of possible environmental impacts from the proposed Project were investigated. Detailed descriptions and analyses of these areas are presented in Sections 8.1 through 8.15 of this SPPE application. With the implementation of reasonable and feasible mitigation measures, there will be no significant environmental effects resulting from the construction or operation of MEGS. The potential effects of some key areas typically of greater interest to CEC Staff are summarized briefly in this section.

1.6.1 Air Quality

The site is located in an area designated as nonattainment for State and Federal ozone air quality standards, and for State fine particulate matter (PM₁₀) standards. An assessment of the impact to air quality was performed using detailed air dispersion modeling. The air impacts from the Project will be mitigated by the advanced nature of the combustion turbine emission control technology. Emission reduction credits (ERCs) have been obtained to offset increases in emissions of volatile organic compounds (VOCs) and nitrogen oxide (NO_x) (both precursors of ozone), and of PM₁₀. The combination of the detailed air-quality modeling analyses and these mitigation measures will result in the project having no significant adverse impact on air quality. See Section 8.1 for a detailed analysis of air quality.

1.6.2 Biology

Land uses in the vicinity of the Project site are primarily residential/industrial. Habitat types potentially affected in the project area are composed of open space, urban forest, residential/commercial landscape, and riparian forest. Historical agricultural practices in this area were not consistent with maintaining wildlife habitat, and therefore biological resources are scarce and widely separated.

Special-status wildlife species with a high or moderate likelihood of occurring in the project area include Swainson's hawk, western burrowing owl, white-tailed kite, great blue heron, snowy egret, and Aleutian Canada goose.

MID has informally consulted with the San Joaquin Council of Governments to confirm project jurisdiction under the San Joaquin Multi-Species Habitat Conservation and Open Space Plan. Prescribed measures described in the plan have been incorporated into the Project design and will be implemented during construction, operation, and maintenance to mitigate potentially adverse impact to these species. Section 8.2 provides a detailed analysis of biological resources and the methods proposed to avoid significant impacts to them.

1.6.3 Noise

Ambient noise measurements were collected to determine the L₉₀ (the noise level that is exceeded during 90 percent of the measurement period) nighttime noise level at the nearest residence (i.e., sensitive receptor). Noise modeling was used to determine the contribution to the nighttime ambient levels the plant would make during operation. Noise levels at the nearest residences will be less than the City of Ripon's Noise Ordinance and General Plan requirements for industrially-zoned areas. Since the noise level at the nearest receptor will be in accordance with local LORS, no adverse impact is expected from the normal operation of the plant, regardless of the metric used.

1.6.4 Visual Resources

The landscape immediately surrounding the Project site includes major industrial and infrastructure facilities, creating a visual mixture of public infrastructure and industry. The site itself is flat and open, and contains no features considered to be scenic resources. Several of the industrial facilities that are scattered throughout the area have tall structures and generate water vapor plumes. For example, Tractabell owns and operates a cogeneration facility near the MEGS site; Nulaid Foods (adjacent) and Feedstuffs Processing Company (within a half mile of the site) have structures, silos, and elevators ranging in height from 50 to 170 feet. There is also a radio tower adjacent to the proposed site that is 499 feet tall. The City of Ripon's wastewater treatment facility and settling ponds are adjacent to the proposed site on the south side of the property. In most of the views toward the site that were evaluated, the visual quality of the landscape from the various key observation points (KOPs) ranged from moderately low to low.

The MEGS features would include two stacks that would be 85 feet tall and 12 feet in diameter. MEGS would have an orderly appearance, would be painted using a neutral color scheme designed to break up its mass and blend it into its environment, would have landscaping in compliance with the City's development standards and integrate the plant into its industrial setting.

The lighting associated with the project would be limited, and would not pose a hazard or adversely affect day or nighttime views toward the site. The project is in general conformance with all LORS related to visual resources in the City plans and zoning ordinance provisions that pertain to this area.

1.6.5 Water Resources

The Project will use non-potable water for the majority of its water needs. Use of non-potable water conserves higher quality surface water and treated groundwater for potable and other critical uses and will have a benefit to water resources.

1.7 Key Benefits

1.7.1 Environmental

MEGS will employ advanced, high-efficiency combustion turbine technology and selective catalytic reduction (SCR) to minimize emissions from the facility. Using natural gas for fuel, MEGS will be among the cleanest facilities of comparable size in the nation. Project emissions will be as much as 85 percent lower than those for existing older generating facilities. MEGS has also obtained emission offsets to more than compensate for its air emissions.

MEGS will also minimize surface water use. Non-potable water from the City of Ripon will be used for plant cooling and process water needs.

1.7.2 Employment

The Project will provide for a peak of approximately 44 construction jobs, with an average of almost 35 construction jobs, over a 1-year period. In addition, it will provide approximately 3 to 5 full-time, living-wage jobs throughout the 30-year life of the plant.

1.7.3 Energy Efficiency

MEGS will be an efficient, environmentally responsible source of economic and reliable energy to serve the growing energy demands of MID. MEGS will help ensure reliable, clean, low-cost electricity in the future.

1.8 Persons Who Prepared the SPPE

Persons with primary responsibility for the preparation of each section of this SPPE are listed in Appendix 1C.

1.9 Laws, Ordinances, Regulations, and Standards

Each section addresses the relevant LORS and compliance with them.

1.10 Permitting Requirements

Each section provides a list of applicable federal, state, and local permits that would be required by each jurisdiction for the project.